

Date: Monday, 1/30/2006 8:05:33 AM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: WEARPLATE
Job Number	: 25642		
Estimate Number	: 10620		
P.O. Number	: N/A	Part Number	: D34601
This Issue	: 1/30/2006 S.O. No. : N/A	Drawing Number	: D3460 REV. A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : PURCHASED PARTS	Drawing Revision	: A
Previous Run	: 24519	Material	: N/A
Written By	: <u>SK COMMENT: RKN</u>	Due Date	: 2/8/2006
Checked & Approved By	: <u>06.01.30</u>	Qty:	20 Um: Each
Comment	: Est: A 05.10.20 New Issue KJ/EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: 00000465

Email or Ship DXF file to vendor

Laser Cut D2577-101 flat pattern as per Dwg D2577

Material release note required

AP  
06/01/30

2.0	D2577101F	Wearplate (flat pattern)
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 20.0000 Each(s)  
 WEARPLATE

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Recieve &amp; Inspect for Transit Damage

Ensure Material Release Note is attached

C 206/02/22 (20)

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Inspect dimensions as per inspection template D2577-101T

C 206/02/22 (20)

06-02-25

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL &amp; MEDIUM FAB RESOURCE 1

Deburr if necessary

N/A SB 06/03/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/30/2006 8:05:33 AM  
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Drawing Name: WEARPLATE

Job Number: 25642

Part Number: D34601

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

1- Form on brake using DT8155 and DT8179 as per Dwg D2577 Rev: A

2- Form end joggle using DT8157 as per Dwg D2577

3- Form Detail "A" joggle using DT8157 as per Dwg D3460 Rev: A

Identify as D3460-1

SB 06/03/01 21

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

06.03.01 21

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld hard surface using DT8308A & DT8308B as per Dwg D3460 Rev: A

Qty Part Number Description Batch

A/R N/A

7560 Hardcoat Rod

M19682

CPL 06.03.20

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

06/03/20

10.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

DL 06/03/20 (21)

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

ML 06 03 21 (21)

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: F.P.

ML 06 03 21 (21)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: LD Date: 06/03/21  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/30/2006 8:05:33 AM  
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Drawing Name: WEARPLATE

Job Number: 25642

Part Number: D34601

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DP 06/03/21

Job Completion



u 06-03.21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

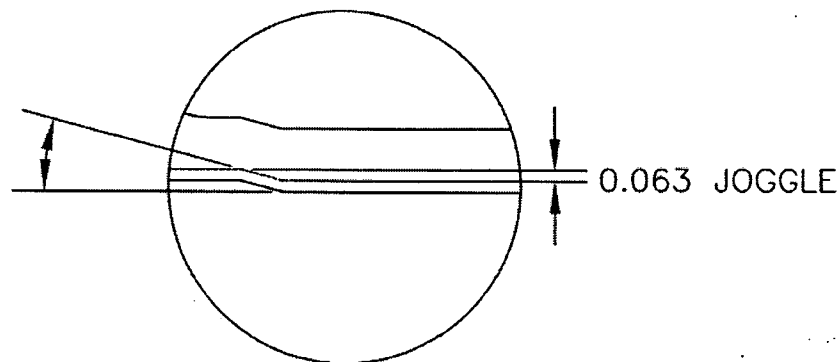
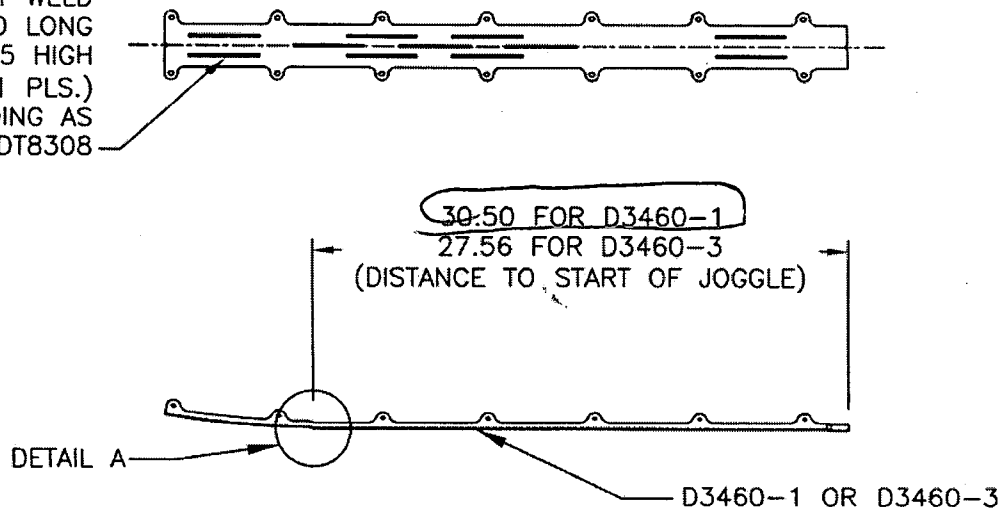
**DART**

RELEASED

05.11.14

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
PH	PH	PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. A
PH	PH	D3460	SHEET 1 OF 1
DATE	TITLE	SCALE	
05.10.04	WEARSHOE	1:10	
A	05.10.04	NEW ISSUE	

7560 HARDCOAT WELD  
4.0 LONG  
0.063 TO 0.125 HIGH  
(TYP. 11 PLS.)  
WELD AFTER BENDING AS  
ILLUSTRATED PER DT8308



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 25642

**D3460-1/-3 WEARSHOE**

- 1) MAKE D3460-1 FROM D2577-11 LONGITUDINAL BEND
- 2) MAKE D3460-3 FROM D2577-13 LONGITUDINAL BEND
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY (4.3.5.6) PER DART QSI 005 4.3
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



New Zealand Steel Limited  
Glenbrook, South Auckland  
Postal: Private Bag 92121, Auckland, New Zealand  
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(09) 235 8089 / 235 3535 Waiuku  
Fax: (09) 375 8959

# TEST CERTIFICATE

Ref: 5748/25194

CUSTOMER	Wilkinson	P50916DI001	SPECIFICATION	ASTMA1008 CS Type A	Reissued 1/12/2005																			
CUSTOMER O/N	90-21N-963		PRODUCT	CRA WIDE COIL	CERTIFICATE No TC122435																			
MILL O/N	507683		DIMENSIONS	0.114" x 48" x Coil	PAGE 1 of 1																			
					DATE 29 November 2005																			
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT													MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)									
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ( )	BEND 180°	YIELD	T.S.	%ELONG G.L.=	HARDNESS HRB	r ( )	LENGTH (feet)
		x100			x1000										x10000		x100							
R9-471775-00	644609	4	TR	20	8	11	11	17	23	1	6	1	1					Good				51		794
R9-471776-00	644609	4	TR	20	8	11	11	17	23	1	6	1	1					Good				51		682
R9-471777-00	644609	4	TR	20	8	11	11	17	23	1	6	1	1					Good				54		768
R9-471778-00	644609	4	TR	20	8	11	11	17	23	1	6	1	1					Good				54		640

*2005*

*P10465*

YIELD (A)=0.2% PROOF STRESS (B)=LOWER YIELD STRESS	GAUGE LENGTH (G.L.) (A)=200mm (C)=80mm (E)=2" (B)=50mm (D)=5.65 So (F)=8"	PLASTIC STRAIN RATIO (r) (A)=r0 (C)=r45 (B)=r90 (D)=(r0+r90+2r45) / 4	IMPACT TEST (A)=10mm x 10mm (B)=7.5mm x 10mm (C)=5mm x 5mm (D)=2.5mm x 10mm (E)=5mm x 10mm	CARBON EQUIVALENT VALUE (CE) (A)=C+Mn/6 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 (C)=C+Mn/6+Si/24 (D)=
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WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED  
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

*Satish Misra*  
QC METALLURGIST





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Glenbrook, South Auckland  
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(09) 235 8089 / 235 3535 Waiuku  
Fax: (09) 375 8955

# TEST CERTIFICATE

Ref: 559724541

CUSTOMER	Wilkinson	P50707DI002	SPECIFICATION	ASTMA1008 CS Type A	CERTIFICATE No	TC120140																			
CUSTOMER O/N	90-21N-830		PRODUCT	CRA WIDE COIL	PAGE	1 of 1																			
MILL O/N	497550		DIMENSIONS	0.044" x 48" x Coil	DATE	17 October 2005																			
PACK NUMBER	HEAT No	CHEMICAL COMPOSITION PERCENT															MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)								
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ( )	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH	
		x100				x1000											x10000		x100		180°			GL=	HRB
R9-467017-00	644043	5	TR	20	14	17	12	17	29	1	8	1	1					Good				52		1965	
R9-467018-00	644043	5	TR	20	14	17	12	17	29	1	8	1	1					Good				52		1939	
R9-467896-00	644286	5	TR	20	12	16	12	17	24	5	5	1	1					Good				49		2031	
R9-467897-00	644286	5	TR	20	12	16	12	17	24	5	5	1	1					Good				49		1932	
R9-467898-00	644286	5	TR	20	12	16	12	17	24	5	5	1	1					Good				50		2031	
R9-467899-00	644286	5	TR	20	12	16	12	17	24	5	5	1	1					Good				50		1808	
R9-468376-00	644291	5	TR	18	8	20	14	16	18	1	5	1	1					Good				45		1978	
R9-468377-00	644291	5	TR	18	8	20	14	16	18	1	5	1	1					Good				45		1955	

YIELD	GAUGE LENGTH (G.L.)	PLASTIC STRAIN RATIO (r)	IMPACT TEST	(C)=5mm x 5mm	CARBON EQUIVALENT VALUE (CE)
(A)=0.2% PROOF STRESS	(A)=200mm (C)=80mm (E)=2"	(A)=r0 (C)=r45	(A)=10mm x 10mm	(D)=2.5mm x 10mm	(A)=C+Mn/6
(B)=LOWER YIELD STRESS	(B)=50mm (D)=5.65 % So (F)=8"	(B)=r90 (D)=(r0+r90+2r45)/4	(B)=7.5mm x 10mm	(E)=5mm x 10mm	(B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15
					(C)=C+Mn/6+Si/24 (D)=

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED  
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED *Satish Misra*  
QC METALLURGIST